

LISTING OF THE CLAIMS

1. (Original) A shape-memory resin having a glass transition temperature (T_g) within the range of 40°C to 200°C and crosslinked by a thermoreversible reaction in which a covalent bond is formed by cooling and dissociated by heating, wherein a dissociation temperature (T_d) of the thermoreversible reaction is 50°C to 300°C and satisfying the relationship: $T_g + 10^\circ\text{C} \leq T_d$; and a transforming temperature at shape memorizing and shape recovering is not less than T_g and less than T_d .

2. (Original) The shape-memory resin according to claim 1, wherein the thermoreversible reaction is at least one type of reaction selected from the group consisting of Diels-Alder reaction, nitroso dimerization reaction, acid anhydride esterification reaction, urethanization reaction, azlactone-hydroxyaryl reaction and carboxyl-alkenyloxy reaction.

3. (Previously presented) The shape-memory resin according to claim 1, wherein the resin is reshapable at a temperature of T_d to less than the decomposition temperature of the resin.

4. (Previously presented) The shape-memory resin according to claim 1, wherein the resin is biodegradable.

5. (Original) The shape-memory resin according to claim 4, wherein the resin is composed of a plant-derived resin as a raw material.

6. (Original) The shape-memory resin according to claim 5, wherein the resin is composed of polylactic acid as a raw material.

7. (Original) The shape-memory resin according to claim 6, wherein the resin is a crosslinked product of polylactic acid in a cool state obtained through the Diels-Alder reaction.

8. (Original) The shape-memory resin according to claim 6, wherein the resin is a crosslinked product of polylactic acid in a cool state obtained through a carboxyl-alkenyloxy reaction.

9. (Previously presented) The shape-memory resin according to claim 1, wherein the resin has a Tg of 40°C to 100°C.

10. (Previously presented) The shape-memory resin according to claim 1, wherein the resin in a cool state has a crosslink density of 0.0001 to 1.

11. (Withdrawn) A shaped product composed of a crosslinked product of the shape-memory resin according to claim 1.

12. (Withdrawn) A shaped product obtained by shaping the crosslinked product of the shape-memory resin according to claim 1 into a predetermined shape to be memorized at a temperature of Td to less than the decomposition temperature of the resin, transforming the shaped product obtained at a temperature of not less than Tg and less than Td, and cooling the transformed product to a temperature less than Tg, thereby fixing a transformed shape.

13. (Withdrawn) A method of using a shaped product of a shape-memory resin wherein the shaped product according to claim 12 is heated to a temperature of not less than Tg and less than Td, thereby recovering a predetermined original shape memorized.

14. (Withdrawn) A method of reshaping a shaped product of a shape-memory resin wherein the shaped product according to claim 11 is melted at a temperature from Td to less than the decomposition temperature of the resin.

15. (Withdrawn) A method of reshaping a shaped product of a shape-memory resin wherein the shaped product according to claim 12 is melted at a temperature from Td to less than the decomposition temperature of the resin.